

# MONDAY

**8:00 – 9:00 REGISTRATION**

**9:00 – 9:30 CONFERENCE OPENING**

## **Session 1: Processing cosmic plasma: turbulence and dynamo processes**

**Part 1 → Chair: Michał Hanasz**

**9:30 – 10:15** Grzegorz Kowal

„Fast Magnetic Reconnection in Turbulent Media”

**10:15 – 10:45** Cary Forest

„Progress towards a high magnetic Reynolds number plasma dynamo in the lab”

**10:45 – 11:10 COFFEE BREAK**

**11:10 – 11:30** Jean-Baptiste Durrive

"Intergalactic magnetogenesis at the Epoch of Reionization by photoionization"

**11:30 – 11:50** Diego Falceta-Goncalves

„Magnetic Fields and the Dynamics of Spiral Galaxies: Origins of Turbulence and Star Formation”

**11:50 – 12:10** Oliver Gressel

„Towards a hybrid dynamo model for the Milky Way”

**12:10 – 12:30** Sergei Komarov

"Suppression of local heat flux in a turbulent magnetized intracluster medium"

**12:30 – 13:30 LUNCH**

**Part 2 → Chair: Rainer Beck**

**13:30 – 14:00** Blakesley Burkhart

„The Role of the Magnetic Field in the Turbulent Molecular Medium”

**14:00 – 14:30** Michał Hanasz

„Magnetic field structures from the Cosmic-Ray-driven dynamo”

**14:30 – 14:50** Katarzyna Otmianowska-Mazur

„Cosmic ray driven dynamo in barred and dwarf irregular galaxies. 3D numerical global simulations”

**14:50 – 15:10** Luke Chamandy

"Dynamo Action in Spiral Galaxies"

**15:10 – 15:30** Sho Nakamura

"Magnetic Fields Evolution in Grand-design Spiral Galaxies with 3D MHD Simulations"

**15:30 – 15:50** Andrey Beresnyak

„Asymmetric diffusion of magnetic field lines”

**15:50 – 16:20 COFFEE BREAK**

**Part 3 → Chair: Grzegorz Kowal**

**16:20 – 17:05** Ethan Vishniac

„Magnetic Helicity and the Galactic Dynamo” REMOTE TALK

**17:05 – 17:25** Kiwan Park

„Influence of small scale magnetic energy and helicity on the growth of large scale magnetic field”

**17:25 – 17:45** Avijeet Prasad

„A helicity constrained model of galactic dynamo in a force-free corona”

**17:45 – 18:05** Luiz Andrade

„Lorentz violation and cosmic magnetic fields from spin-polarised qcd domain walls”

**18:05 – 18:35 DISCUSSION**

19:00 - ..... INVITATION DINNER

## TUESDAY

### Session 2: Magnetic fields in and around stellar and compact objects

Part 1 → Chair: Marek Jamrozy

9:00 – 9:45 Maxim Lyutikov

„Magnetars: why, where and how flares occur.”

9:45 – 10:15 Reinaldo Santos-Lima

„Reconnection Diffusion efficiency during star formation”

10:15 – 10:35 Ding-Xiong Wang

„The Role of Magnetic Field in State Transition of Black Hole X-ray Binaries”

10:35 – 11:10 **COFFEE BREAK**

11:10 – 11:30 Timothy Handy

"Impact of self-generated magnetic fields on the core-collapse supernova explosion mechanism"

11:30 – 12:00 **DISCUSSION**

12:00 – 13:00 **LUNCH**

### Session 3: Magnetic fields in our and external galaxies

Part 1 → Chair: Maxim Lyutikov

13:00 – 13:45 Marijke Haverkorn

„Magnetized turbulence in the Milky Way and M51”

13:45 – 14:05 Roland Kothes

"A Relation between the Warm Neutral and Magneto-ionized Media Observed in the Canadian Galactic Plane Survey"

14:05 – 14:25 Michiel Brentjens

„The polarized Galactic synchrotron foreground: an unlikely calibrator”

14:25 – 14:45 Emily Freeland

"A Magnetically Draped Bubble in the Nucleus of a Nearby Galaxy : The Face-On Extragalactic Analogue to Our Galactic Center"

14:45 – 15:05 Niels Opperman

"Magnetic fields as seen through Faraday rotation from the Milky Way to cosmic scales"

15:05 – 15:25 Vibor Jelic

„Diffuse polarized emission in the LOFAR-EoR observing windows”

15:25 – 16:00 **COFFEE BREAK**

Part 2 → Chair: Marijke Haverkorn

16:00 – 16:30 Marita Krause

„Magnetic fields in galaxies (including first results from the EVLA CHANG-ES survey)”

16:30 – 16:50 David Mulcahy

"Nearby Spiral Galaxies at Low Frequencies: First observations of nearby galaxies with LOFAR"

16:50 – 17:10 Aritra Basu

"Magnetic field strengths and ISM properties of star-forming galaxies"

17:10 – 17:40 **DISCUSSION**

## WEDNESDAY

### Session 3: Magnetic fields in our and external galaxies

Part 3 → Chair: Axel Brandenburg

9:00 – 9:45 Andrew Fletcher

„What do we really know about the magnetic fields of spiral galaxies?“

9:45 – 10:15 Ann Mao

"Properties of the Magneto-ionic Medium in the Halo of M51 revealed by Wide-band Polarimetry"

10:15 – 10:35 Anna Williams

"Untangling the Magnetic Fields in NGC 6946 Using Wide-Band Polarimetry"

10:35 – 10:55 Sarrvesh S. Sridhar

"Magnetic field structures in the Pinwheel galaxy (M101/NGC5457)"

10:55 – 11:25 **COFFEE BREAK**

Part 4 → Chair: Cathy Horellou

11:35 – 12:05 Dominik Bomans

„Magnetic fields in low mass galaxies“

12:05 – 12:25 Krzysztof Chyży

„Magnetic fields in dwarfs, Magellanic-type and perturbed galaxies. Next surprises“

12:25 – 12:55 Marek Jamroz

„The extreme radio galaxies and their impact on the environment“

12:55 – 13:15 Sumana Nandi

"A radio study of misaligned double-double radio galaxies"

13:15 – 13:35 **DISCUSSION (Andrew Fletcher)**

13:35 – 14:35 **LUNCH**

### Session 4: Detection of magnetic helicity and modelling polarized emission

Chair: (Katarzyna Otmianowska-Mazur)

14:35 – 15:20 Axel Brandenburg

„Detection of magnetic helicity in stars and galaxies“

15:20 – 15:50 Dominic Schnitzeler

„Polarization spectra of point sources“

15:50 – 16:20 **COFFEE BREAK**

16:20 – 16:40 Rodion Stepanov

"Polarization features of the Faraday thick source with the helical magnetic field"

16:40 – 17:00 Cathy Horellou

„Helical magnetic fields and Faraday depolarization“

17:00 – 17:30 **DISCUSSION**

## THURSDAY

### Session 5: Magnetic fields in galaxy systems: pairs, groups, clusters and the filaments

Part1 → Chair: Uli Klein

**9:00 – 9:45** Gianfranco Brunetti

„Cosmic rays in galaxy clusters and their interplay with magnetic fields”

**9:45 – 10:15** Alexander Beck

„How do magnetic fields and galaxy formation connect?”

**10:15 – 10:35** Marek Urbanik

„Recent results on intergalactic magnetic fields”

**10:35 – 10:55** Błażej Nikiel-Wroczyński

„Multifrequency analysis of the magnetic field in HCG92 and Arp 143”

**10:55 – 11:25** **COFFEE BREAK**

Part2 → Chair: Marek Urbanik

**11:25 – 12:10** Dongsu Ryu

„Magnetic fields in the cosmic web”

**12:10 – 12:30** Therese Cantwell

„Diffuse Radio Emission in Low Surface Brightness Galaxy Clusters”

**12:30 – 12:50** Ancor Damas Segovia

„Effects of the IGM on the magnetic field of galaxies”

**12:50 – 13:10** Motokazu Takizawa

"Particle acceleration processes in galaxy cluster radio relics investigated through X-ray and radio observations"

**13:10 – 13:40** **DISCUSSION**

**13:40 – 14:40** **LUNCH**

**15:00 – 19:00** **TRIP**

**19:00 - .....** **CONFERENCE DINNER**

## FRIDAY

## **Session 6: Observations of magnetic fields: novel methods and future prospects**

**Chair: Krzysztof Chyży**

**9:00 – 9:30** Rainer Beck

„Observing cosmic magnetism with the SKA”

**9:30 – 10:00** Jean-Philippe Bernard

„The All-sky Thermal Dust Polarization as Observed with Planck”

**10:00 – 10:30** **COFFEE BREAK**

**10:30 – 10:50** Chi Thiem Hoang

„A novel method for measuring interstellar magnetic fields using UV polarimetry”

**10:50 – 11:20** **DISCUSSION**

**11:20 – 12:05** Uli Klein

**SUMMARY**

**12:05 – 13:05** **LUNCH**

**THE END**